

AMCAA-A

AMMETER, CLAMP-ON

1. GENERAL. This application requires a clamp-on current/power probe capable of measuring ac and dc current and ac power.

2. CLASSIFICATION. Type II, Class 3, Style EP, and Color R in accordance with MIL-T-28800 for shipboard applications.

3. OPERATIONAL REQUIREMENTS. The equipment shall operate within the minimum ranges and accuracies specified below.

3.1 Multimeter compatibility. The equipment shall be compatible with multimeters that have the following specifications.

3.1.1 Input connectors. 19 mm (0.75 in) spaced banana jacks.

3.1.2 Input impedance. ≥ 1 megohm, 100 pF.

3.2 Scaling range. 1 mV/A and 1 mV/kW.

3.3 Electrical measurement specifications. See table I.

TABLE I. Electrical Measurement Specifications

<u>FUNCTION</u>	<u>MEASUREMENT RANGE</u>	<u>ACCURACY</u>
DC Current	1 to 1,000A	1 to 700A, 2% + 2A 700 to 1,000A, 3%
AC Current	1 to 1,000A	1 to 500A dc to 62 Hz, 2% + 2A 62 to 440 Hz, 6% + 2A 500 to 700A dc to 62 Hz, 3% 62 to 440 Hz, 7% 700 to 1,000A dc to 62 Hz, 6% 62 to 440 Hz, 8%
AC Power	0.5 to 330 kW	48 to 62 Hz 3.5% + 500W (pwr factor > 0.5) 390 to 410 Hz 4% + 500W (pwr factor > 0.9)

3.4 Crest factor. 3.0 minimum.

3.5 Temperature coefficient. 6% x specification allowed for every °C outside range of 18 to 28°C.

3.6 Heating limitation. 5 minutes operating time for 120 A-kHz current-frequency product.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 dc internal power source requirements are invoked. The batteries shall be of a commercially available type and provide 100 hours of operation before replacement. The nominal power source requirements are not invoked.

4.2 Weight. 1 kg (2.2 lb) maximum.

4.3 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.

4.4 Transit case. The Style P transit case shall provide protection for all components of the probe assembly.